

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the present application.

LISTING OF CLAIMS:

Claims 1 to 22. (Canceled).

23. (Currently Amended) A fuel injector for a fuel injection system of an internal combustion engine, comprising:

- an energizable actuating element;
- a valve needle that is axially movable along a longitudinal axis of a valve;
- a fixed valve seat;
- a valve seat element including an orifice following downstream from the fixed valve seat;
- a valve closing section arranged on a downstream end of the valve needle and for working together with the fixed valve seat for opening and closing the valve, wherein:
 - the fixed valve seat is designed on the valve seat element;
 - a flattened face running perpendicular to the longitudinal axis of the valve and being arranged on the downstream end of the valve closing section downstream from the fixed valve seat;
 - a guide element including alternating recesses and tooth-shaped projecting areas along a periphery of the guide element, the recesses configured to channel fuel through the guide element; and
 - a swirl-producing element arranged upstream from the fixed valve seat and downstream of the guide element, wherein:
 - the flattened face includes a diameter d that is greater than a diameter D of an outlet orifice, and an entry plane of the outlet orifice is arranged such that the entry plane is completely covered by a projection of the flattened face into the entry plane in a direction perpendicular to the flattened face.

24. (Currently Amended) The fuel injector according to claim 23, wherein:
the fuel injector is configured for a direct injection of a fuel into a combustion chamber of the internal combustion engine.

25. (Previously Presented) The fuel injector according to claim 23, wherein:
a ratio of the diameter d of the flattened face to the diameter D of the outlet orifice is approximately 1.5.

26. (Previously Presented) The fuel injector according to claim 23, wherein:
the valve closing section includes a curved area that is at least partially one of spherical and rounded, and
the flattened face is adjacent to the curved area.

27. (Previously Presented) The fuel injector according to claim 23, wherein:
the valve closing section includes a conical area that is at least partially a truncated conical taper in a downstream direction, and
the flattened face follows the conical area.

28. (Previously Presented) The fuel injector according to claim 23, wherein:
the swirl-producing element includes a disk-shaped swirl element directly upstream from the fixed valve seat.

29. (Previously Presented) The fuel injector according to claim 23, wherein:
the outlet orifice is formed in the valve seat element.

30. (Currently Amended) The fuel injector according to claim 23, wherein the valve seat element includes a spray element which includes the outlet orifice and is arranged downstream from the valve seat face ~~the valve seat element, wherein:~~
~~the spray element is part of the valve seat element.~~

31. (Previously Presented) The fuel injector according to claim 28, wherein:
the disk-shaped element includes an inner opening area having a plurality of swirl channels that extend completely over an entire axial thickness of the disk-shaped swirl element, and

the plurality of swirl channels is not connected to an outer periphery of the disk-shaped swirl element by a peripheral edge area.

32. (Previously Presented) The fuel injector according to claim 31, wherein:

the inner opening area is formed by an inner swirl chamber and by the plurality of swirl channels opening into the inner swirl chamber.

33. (Previously Presented) The fuel injector according to claim 32, wherein:
the plurality of swirl channels includes ends at a distance from the inner swirl chamber, and

the ends as inlet pockets include a larger cross section than a remainder of the plurality of swirl channels.

34. (Currently Amended) A fuel injector for a fuel injection system of an internal combustion engine, comprising:

an energizable actuating element;

a valve needle axially movable along a longitudinal axis of a valve;

a fixed valve seat;

a valve seat element including an orifice following downstream from the fixed valve seat;

a valve closing section arranged on a downstream end of the valve needle and arranged to work together with the fixed valve seat to open and close the valve;

wherein the fixed valve seat is arranged on the valve seat element;

wherein a flattened face extends perpendicular to the longitudinal axis of the valve and is arranged on the downstream end of the valve closing section downstream from the fixed valve seat;

wherein a guide element include alternating recesses and tooth-shaped projecting areas along a periphery of the guide element, the recesses configured to channel fuel through the guide element;

wherein a swirl-producing element is arranged upstream from the fixed valve seat and downstream of the guide element;

wherein the flattened face includes a diameter that is greater than a diameter of an outlet orifice; and

wherein a projection of the flattened face in a direction perpendicular to the flattened face into ~~[[the]]~~ an entry plane of the outlet orifice completely covers the entry plane.

35. (New) A fuel injector for a fuel injection system of an internal combustion engine, comprising:

- an energizable actuating element;

- a valve needle that is axially movable along a longitudinal axis of a valve;

- a fixed valve seat;

- a valve seat element including an orifice following downstream from the fixed valve seat;

- a valve closing section arranged on a downstream end of the valve needle and for working together with the fixed valve seat for opening and closing the valve, wherein:

 - the fixed valve seat is designed on the valve seat element;

 - a flattened face running perpendicular to the longitudinal axis of the valve and being arranged on the downstream end of the valve closing section downstream from the fixed valve seat; and

 - a swirl-producing element arranged upstream from the fixed valve seat;

 - wherein the flattened face includes a diameter d that is greater than a diameter D of an outlet orifice, and an entry plane of the outlet orifice is arranged such that the entry plane is completely covered by a projection of the flattened face into the entry plane in a direction perpendicular to the flattened face, the diameter d sized so that an outlet plane of the outlet orifice in the projection is at least partially covered by the flattened face.

36. (New) A fuel injector for a fuel injection system of an internal combustion engine, comprising:

- an energizable actuating element;

- a valve needle that is axially movable along a longitudinal axis of a valve;

- a fixed valve seat;

- a valve seat element including an orifice following downstream from the fixed valve seat;

- a valve closing section arranged on a downstream end of the valve needle and for working together with the fixed valve seat for opening and closing the valve, wherein:

 - the fixed valve seat is designed on the valve seat element;

a flattened face running perpendicular to the longitudinal axis of the valve and being arranged on the downstream end of the valve closing section downstream from the fixed valve seat; and

a swirl-producing element arranged upstream from the fixed valve seat;

wherein the flattened face includes a diameter d that is greater than a diameter D of an outlet orifice, and an entry plane of the outlet orifice is arranged such that the entry plane is completely covered by a projection of the flattened face into the entry plane in a direction perpendicular to the flattened face, a center of the flattened face and a center of the entry plane arranged in alignment in a single axis.